

We claim:

1. A wireless communication system for communication between a base station and a plurality of subscriber stations, comprising:
 - an uplink channel structure for said plurality of subscriber stations to communicate with said base station and said uplink channel structure including a plurality of dedicated channels and a user control channel;
 - a downlink channel structure including a plurality of dedicated channels and at least one user control channel to communicate with subscriber stations to which no dedicated channel is allocated; and
 - wherein said user control channel transmits data between said base station and at least one of said plurality of subscriber stations in frames having a first time duration, each said frame having a series of slots representing subsets of said first time duration and each subscriber station employing said user control channel being allocated at least a portion of a slot in said frames.
2. The wireless communication system of claim 1 wherein at least one subscriber station is allocated a slot in said frames.
3. The wireless communications system of claim 1 wherein at least one subscriber station is allocated at least two slots in said frames.
4. The wireless communications system of claim 1 wherein two subscriber stations share a slot in said frame.
5. The wireless communications system of claim 4 wherein said two subscriber stations alternately employ said slot in successive frames.
6. The wireless communication system of claim 1 wherein at least one slot in said frame is deemed a random access slot for use by two or more selected subscriber stations via a random

access protocol.

7. The wireless communication system of claim 1 wherein power control information is transmitted via said user control channel.

8. The wireless communication system of claim 1 wherein firmware updates are transmitted via said user control channel.

9. The wireless communication system of claim 1 wherein said downlink channel structure further includes a broadcast packet data channel and wherein acknowledgements for receipt of a packet from said broadcast packet data channel are transmitted from a receiving subscriber station to said base station via said user control channel.

10. The wireless communication system of claim 1 wherein a subscriber station de-allocates said portion of a slot in said user control channel when a dedicated channel is allocated to said subscriber station.

11. A wireless communication system for communication between a base station and a plurality of subscriber stations, comprising:

a plurality of dedicated channels dynamically allocateable for said plurality of subscriber stations to communicate with said base station; and,
at least one user control channel for communicating between said base station and at least to those of said subscriber stations to which no dedicated channels is allocated, and wherein each one of said user control channels occupying less radio resources than one of said dedicated channels

12. The wireless communication system according to claim 11 wherein said dedicated channels

are bi-directional.

13. The wireless communication system according to claim 11 wherein said at least one user-control channel is bi-directional.
14. The wireless communication system according to claim 11 wherein said system further includes at least one shared data channel.